

CLAIMS

1. A cluster computer system comprising:

a plurality of network accessible computers, each including a central processing unit and non-volatile memory, where each of said network accessible computers is coupled to a network, where said network accessible computers implement host computer program means which permit the network accessible computers to operate as host computers for client computers coupled to said network, whereby input devices of said client computers can be used to generate inputs to said host computers, and such that image information generated by said host computers can be viewed by said client computers; and

a cluster administration computer coupled to said plurality of network accessible computers to monitor the operation of said network accessible computers.

2. A cluster computer system as recited in claim 1 wherein said plurality of network accessible computers are coupled to said network with a corresponding plurality of communications channels.

3. A cluster computer system as recited in claim 1 wherein said plurality of network accessible computers also each include volatile memory and data bus controllers.

4. A cluster computer system as recited in claim 1 wherein said network is a TCP/IP protocol network, and wherein said host computer program means are responsive to keyboards and pointing devices of said client computers as transmitted to said host computers over said TCP/IP protocol network under the control of client programs running on said client computers, said host programs transmitting said image information to said client computers over said TCP/IP protocol network for display in browser windows of browser programs running on said client computers.

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5. A cluster computer system as recited in claim 4 wherein said client programs are transmitted to said client computers over said TCP/IP protocol network.

5 6. A cluster computer system as recited in claim 5 wherein said client programs are Java Applet programs.

7. A cluster computer system as recited in claim 4 wherein said cluster administration computer is operative to control at least one function of said network accessible computers.
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8. A cluster computer system as recited in claim 7 wherein said at least one function is to reset a selected network accessible computer.

9. A cluster computer system as recited in claim 4 wherein said cluster administration computer is coupled to said network to receive inputs from other computer systems coupled to said network.
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10. A cluster computer system as recited in claim 4 wherein said cluster administration computer serves to coordinate the sharing of at least one local resource by said network accessible computers.
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11. A cluster computer system as recited in claim 10 wherein said at least one local resource is a data storage device.
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12. A cluster computer as recited in claim 4 wherein said cluster administration computer is running a cluster administration program which administers the connection of a client computer to a host computer, and wherein said cluster administration computer serves as an intermediary between a first network shared by said network accessible computers and a second network shared by said client computers .
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13. A method for providing access to host computers by client computers over a computer network comprising:

5 receiving a request for a host computer coupled to a computer network from a client computer coupled to said computer network, wherein the relationship of said host computer to said client computer is to be such that after said client computer becomes associated with a host computer, an input device of said client computer can be used to generate inputs to said host computer, and such that image information generated by said host computer can be viewed by said client computer
10 due to a host computer program means implemented on said host computer;

determining a suitable host computer for said client computer; and

informing said client computer of the network address of said suitable host computer, whereby said client computer can become associated with said host computer.

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14. A method for providing access to host computers by client computers over a computer network as recited in claim 13 wherein determining a suitable host computer includes receiving the desired requirements for a host computer from said client computer, and comparing said desired requirements to the
20 characteristics of available host computers on said computer network.

15. A method for providing access to host computers by client computers over a computer network as recited in claim 13 further comprising examining data packets on a first network to which said client computer is coupled
25 and examining data packets on a second network to which said host computer is coupled, forwarding data packets for said host computer from said first network, forwarding data packets for said client computer from said second network, and processing data packets for at least one control purpose.

30 16. A method for providing access to host computers by client computer over a computer network as recited in claim 15 further comprising monitoring the functionality of a plurality of network accessible computers, and resetting a network accessible computer if it is determined that it is not functioning properly.

17. A computer readable media having program instructions implementing the method of claim 16.

5 18. A computer readable media having program instructions implementing the method of claim 13.

19. A wide area TCP/IP protocol network comprising:

10 a plurality terrestrial nodes capable of transmitting and receiving TCP/IP compatible data packets, where at least some of said terrestrial nodes are capable of repeating TCP/IP data packets destined for other terrestrial nodes;

15 a plurality of non-terrestrial nodes capable of transmitting and receiving TCP/IP compatible data packets, where at least one of said non-terrestrial nodes can communicate with at least one terrestrial node, and wherein said at least one non-terrestrial node includes a host computer that can be controlled from a terrestrial node due to a host computer program means implemented on said host computer.

20. A wide area TCP/IP protocol network as recited in claim 19 wherein:

20 said non-terrestrial nodes include a plurality of earth orbiting satellites that communicate with TCP/IP compatible data packets, and wherein said terrestrial nodes repeat a received TCP/IP data packet if it is not timed out, if it has not previously received that data packet, and if that data packet was not destined for that terrestrial node.

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